Climate Change Action Plan Task Force Second Meeting
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Government Leadership and Action (GLA) Working Group Update

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GLA-1 Energy Use in Buildings (formerly Building Efficiency and Conservation)

The state could expand its efforts to achieve a 10% reduction in energy consumption in all state buildings.

1.1 State Defined High Performance Public Building Standards/LEED Rating for New Buildings (formerly 1.5 Building Design)

Current state policy requires that new construction and major renovations of all state building projects exceed existing State Energy Code by 20%. This satisfies the mid-level criteria for LEED – Energy & Atmosphere Section. Past projects have shown that a more stringent level of efficiency may be in order. An immediate target of 30% more efficient than code should be set. Furthermore this requirement should be extended to all building projects receiving state funding (state facilities, local schools, etc.) The state should set additional targets as follows: 1.) mandate that by 2015, all construction now following the policy must be designed to exceed code by 40%; 2.) by 2025, all construction must receive LEED silver certification through the U.S. Green Buildings Council (USGBC). To achieve these goals, the state may also need to provide education and outreach to towns, the NH Department of Education, and others, so that they become familiar with LEED standards as well as the benefits.

Notes: The current policy (as established by Executive Order) applies to new buildings that will cost >$1 million, building additions that add 25 percent or greater floor area and/or will cost >$1 million, and building renovations that exceed 25 percent of gross floor area. See the State Facility Construction - Energy Cost Reduction Policy.

Under the High Performance Schools Program, school construction projects that achieve the Collaborative for High Performance Schools certification are eligible for additional school aid funding from the NH Dept. of Education.

The Jordan Institute oversees these programs in New Hampshire and provides technical assistance and training to building owners, municipalities, schools, etc., on all aspects of LEED and high performance buildings. They also have established a revolving loan fund for such purposes.

1.2 Energy Savings Funding Program (formerly 1.1 State Shared Energy Savings Program)

The state should establish a program that provides funding and other incentives to agencies for projects that achieve savings through energy efficiency and conservation. The State should increase participation in the Demand Response programs offered by the regional Independent System Operator in order to generate additional revenue to sustain funding for the program. The program would limit the funded projects to efficiency and conservation efforts and renewable energy techniques that save their initial investment over a set period.

Notes: The Building Energy Conservation Initiative (BECI) was established in 1997 to implement "Performance Contracting" whereby energy retrofits and building upgrades could be completed and paid for by the energy savings from the project, rather than be funded through capital appropriations. At this point in time, there are only a few projects large enough to attract a contractor so the program needs to be altered to allow for smaller projects to be bundled together. To provide incentives and on-going funding, the savings need to be placed in an "Energy Efficiency Fund." (Lighting @ <4yr, HVAC @ 8yr; and Renewable Projects @ 15yrs).

HB1647-FN-A: This bill establishes a fund for demand response program revenue to be used for energy performance contracts and demand response program expenses. "21-I:19-f Energy Efficiency Fund. There is hereby established an energy efficiency fund into which shall only be deposited moneys received by the state for participating in demand response programs. The state treasurer may invest moneys in the fund as provided by law, with interest received on such investment credited to the fund. Moneys in the fund shall be nonlapsing and continually appropriated to the division of plant and property management to be used exclusively to fund energy performance contracts and to reimburse state agencies for demand response program expenses." This bill is currently in the House Ways & Means Committee; due out March 13, 2008. Will this limit the allowable use of the funds for projects other than energy performance contracts and reimbursement for demand response program expenses?

1.3 Procurement Policies (formerly 1.2 Energy Star Purchase Policy & 1.4Climate Savers Computing Initiative)

Current state policy requires all electronic equipment and appliances purchased (or leased) for use in state buildings to be Energy Star certified or better. This policy should be expanded and more widely implemented.

New Hampshire state government has signed on to the State Electronics Challenge (a regional off shoot of the Federal Electronics Challenge at *http://stateelectronicschallenge.net/*). The challenge for NH includes 3 components: Acquisition & Procurement Activities, Operation & Maintenance Activities, and End-of-Life Management Activities.

The state could also join the Climate Savers Computing Initiative, lead by the National Governor's Association (NGA). The initiative is a nonprofit organization dedicated to promoting smart technologies that can improve the power efficiency and reduce the energy consumption of computers.

Notes: The current state policy (as established by Executive Order) requires all purchases for office equipment, appliances, lighting, and other building components

to be Energy Star compliant. See the Energy Star Products & Equipment Procurement Policy. *However, there is no oversight for ensuring that smaller purchases are complying (field purchase orders). The policy could be revised to require purchases to meet the best energy efficiency standards available at the time, including Energy Star, Climate Savers, or others.*

1.4 Energy Reduction Measures for State Employees and Facilities (new recommendation)

The state should establish and implement policies to reduce energy use by government employees relative to operation and maintenance of equipment and buildings. The policies should include, but not be limited to, measures related to 1) personal computers, laptops, speakers, monitors, copiers, and printers; 2) lighting and miscellaneous electrical equipment; 3) facility management (e.g., thermostat settings, hot water settings); 4) water conservation; and 5) waste/paper reduction.

Notes: To ensure compliance with any of the above options, an education and outreach program will be necessary for government employees at all levels.

1.5 Building Automation Systems (formerly 1.3)

The state could expand the usage of Building Automation Systems (BAS) to optimize the usage of HVAC equipment it owns and leases. Use of BAS greatly increases the interaction of mechanical subsystems within a building, improves occupant comfort, and lowers energy use.

Notes: This could be broken down further beyond HVAC systems to include room/area lighting sensors, water faucet sensors, etc.

1.6 Use of Renewables for Building Heat and Hot Water (formerly 2.3 Building Heating & Hot Water)

The state could establish a policy that requires a certain portion of building energy, whether in state-owned or leased facilities to come from renewable energy sources. This policy may require retrofits to facilities and could include:

1.6.1 Bioheating Oil (formerly 2.3.1)
1.6.2 Solar Hot Water Heat (formerly 2.3.2)
1.6.3 Combined heat and power (formerly 2.3.3)
1.6.4 Ground source heat pumps (formerly 2.3.4)
1.6.5 Biomass (new addition)

Notes: Option should leave open the choice of renewable, depending on technology, cost effectiveness, availability, etc.

1.7 Existing Buildings (new recommendation)

1.7.1 Energy Star Rating

The state should examine its existing stock of buildings, benchmark the buildings, and determine which can be considered Energy Star efficient or

better. A plan and schedule should be developed for doing audits on the remaining stock should be brought up to Energy Star efficiency or better.

Note: The Department of Administrative Services has been charged with conducting this survey. Is outside assistance warranted to move this project along?

1.7.2 Re-commissioning of Existing Buildings

Over time, routine maintenance may not be performed at an interval needed to keep existing building systems operating at optimum energy saving efficiency. The state should develop a policy of periodic re-commissioning to assure existing state facilities maintain optimum operating efficiency.

1.7.3 Leased Space

The state should develop a policy of leasing only energy star or better rated leased space. This would provide an incentive for private building owners to incorporate energy efficiency into their leased spaces.

The State should require all landlords that sign *Gross Leases* with the State supply copies of utility bills to the occupying agencies for their review. This would ensure that reductions in energy use by state employees in leased space are being reflected in cost savings to the state.

Notes: If the State is being charged say $4.00/SF in the lease rate but billing shows a lower cost per SF, a lease renegotiation is in order.

GLA-2 State Promotion of Renewable Energy and Energy Efficiency Technologies

2.1 Siting/Promoting Renewable Energy and Energy Efficiency Projects on State Properties

The state or municipalities should directly promote renewable projects by allowing modifications to existing buildings and structures to provide much needed space for renewable and energy efficiency technology, such as innovative water reclamation or applying solar panels. These existing properties can improve and change the existing infrastructure to include high-efficiency solutions like water conservation and renewable energy generation in a low-impact locally involved way. Such projects are becoming more and more useful throughout the country.

Public lands should be the last resort for such projects as they are designated for the public good as undeveloped areas in the state. Public lands have the added benefit of providing our communities with something that homes, schools, churches and other community structures cannot. Serenity, calm, and interaction with the out of doors are irreplaceable and protecting these valued areas should be our number one priority

Notes: All renewable projects and energy efficiency technologies should be included in this option – wind, solar, biomass, geothermal, methane and innovative energy efficiency technologies.

2.2 Renewable Electricity Purchase

In the event that consumer clean energy purchase options are developed, the state should purchase a certain, and potentially increasing, percentage of its electricity above the existing Renewable Portfolio Standard level from new renewable energy sources (Class I). Any marginal cost in electricity could be offset by energy efficiency gains made in state facilities.

Notes: The current RPS will require electricity suppliers to provide 16.3 percent of electricity from new renewable energy sources by 2025 (in the form of renewable energy credits). New renewable energy includes wind, biomass, geothermal, and solar. Governments (state, local, county) could increase requirements for new renewable energy to greater percentages, e.g., 20 percent by 2020, 25 percent by 2025.

GLA-3 State Vehicles (formerly Transportation)

3.1 Procurement Policy (formerly Low GHG Procurement Policy)

The state should expand its existing efforts to purchase fuel-efficient low emission vehicles by establishing a procurement policy to reduce GHG emission rates for its fleet of cars and light trucks, whether owned, leased, or contracted. This policy should be met by vehicles that utilize biofuels, compressed natural gas, fuel cells, hybrid technology, or other alternative fuels, and could be encouraged for private fleets statewide. The policy should be accompanied with plans to establish the infrastructure necessary for supplying the alternative fuels and fuel blends.

3.1.1 Fuel Economy Standards (formerly Low-MPG Mandate)

A set of criteria should be established that ensures that any vehicles purchased meet a specific fuel economy for their size and purpose.

3.1.1.1 Hybrid Vehicle

The state should require a certain percentage of the fleet to possess hybrid technology with attention paid to the distinction between hybrid cars with better fuel economy and hybrids with more power.

3.1.1.2 Right-Sizing (renumbered - formerly 3.1.2)

A set of criteria could be established to make sure the vehicle meets the needs of the task it will perform, can use a low GHG fuel and gets a certain MPG for that class of vehicle that it must be.

3.1.2 Alternative Fuels/Renewables (formerly 3.1.3 Low Carbon Fuel Mandates)

The state should establish a policy that requires all vehicles to be capable of operating on alternative and renewable fuels with attention paid to the lifecycle emissions associated with the fuels required.

3.1.2.1 Biodiesel

For the existing fleet that operates on diesel fuel, the state should require the use of B5 until such time as ASTM standards for B20 are developed.

3.1.2.2 Ethanol

With consideration for the lifecycle emissions of ethanol, the state should require that a certain percentage of the fleet be capable of running on ethanol and establish the infrastructure to provide higher percentage fuel blends (e.g. E85).

3.1.2.3 Compressed Natural Gas

The state should establish a requirement that a certain number of vehicles for the appropriate applications are able to run on compressed natural gas.

Notes: As established by Executive Order and Dept. of Administrative Services policy, the NH Clean Fleets Policy includes requirements for new vehicle purchases, including: 1) minimum fuel economy ratings (27.5 mpg for passenger and light duty gasoline vehicles and 20.0 mpg for light duty trucks), 2) four cylinder, and 3) emissions classifications (LEV or ULEV). In addition, purchases must be made to ensure that the most appropriate, fuel efficient vehicle is selected and that alternative fuel vehicles are considered first, whenever possible. A more stringent purchasing policy could be established at this time to go above and beyond the existing policies. Also, better tracking and oversight of the state fleet/policy is needed to access its true impacts.

3.2 Consumption Reduction/VMT (formerly State Government VMT Reduction Plan)

The state is a significant employer and can establish policies and programs that enable the state employees to reduce the amount of time spent on the road.

3.2.1 Commuting

To reduce the emissions associated with the travel to and from work by state employees, the state should institute policies that enable more widespread use of strategies that reduce travel such as telecommuting, the use of flextime, and allowing schedules such as four 10-hour days, or eight 9-hour days.

3.2.2 State Business Related Travel

To reduce the emissions associated with state-related travel, the state could institute policies that enable more widespread use of strategies that reduce travel such as teleconferencing capacity. State business trips should be consolidated whenever possible (e.g. trips to the same place at the same time) and vehicles should be assigned automatically based on fuel efficiency and distance traveled.

3.2.3 State Government Fuel/Fleet Efficiency Measures (new recommendation)

The state should establish and implement policies to reduce fuel consumption including, but not limited to, a no-idling policy, improved driver habits, better trip planning.

Notes: Included in the NH Clean Fleets Policy are best management practices including idling reduction, use of "Energy Conserving" motor oils, proper tire pressure, low rolling resistance tires, reducing drag and weight, carpooling, trip consolidation, and teleconferencing. As with the other options outlined above, an education and outreach program will be needed to promote these practices with government employees at all levels.

GLA-4 State Leading-by-Example (new recommendations)

4.1 State government to become carbon neutral

The state should set a goal for state government to become carbon neutral by a certain date (say 2050). This would provide a target and goal for the rest of the state to follow.

4.2 Establishment of an Energy Management Unit

To demonstrate its commitment to reducing greenhouse gases and meeting the goal, the state should establish an Energy Management Unit (location to be determined) to oversee state government efforts to reduce energy use and cost, reduce greenhouse gases, and achieve energy reduction/climate change goals. The Unit should include at a minimum the following resources:

Overall Energy Manager
Project Manager
Data Management Specialist
Fleet Manager
Outreach and Education Specialist